

# FACTORS AFFECTING THE CHOICE OF HEALTH SPECIALTY BY MEDICAL GRADUATES

**Saleh S. Al-Ansari, MD, FFCM (KFU), Mohamed A. Khafagy, MD, PhD (Pb.H)**  
Directorate General of School Health, Ministry of Education, Riyadh, Saudi Arabia

**مقدمة :** التخصص هو الانتقال من مرحلة خريج الطب غير المتخصص إلى الطبيب المتخصص الذي غالبا ما يقتصر على مجال محدد في العمل الصحي. واختيار الطبيب للتخصص الطبي الذي سيعمل به موضوع هام لكل من الطبيب والمجتمع. فهو أحد المحددات الهامة للعدد المستقبلي للأطباء في التخصصات المختلفة، وفي التخطيط للقوى العاملة في مجال الخدمات الصحية. تؤثر العديد من العوامل في اختيار طالب الطب والطبيب العام للتخصص الطبي، وتتراوح هذه العوامل بين الخصائص الفردية للطبيب وخصائص التخصص الطبي نفسه بما في ذلك النمط المعيشي المتعلق بالتخصص.

يستعرض هذا المقال العوامل التي تؤثر في اختيار طالب الطب والطبيب اليافع للتخصص الطبي. ويقترح المقال أيضاً بعض المبادئ العامة والعملية التي يمكن للأطباء إتباعها ليستطيعوا اختيار التخصصات الطبية التي تناسب خصائصهم الشخصية، ومن منظور أوسع يضع في الاعتبار الاحتياجات الصحية للمجتمع.

**الكلمات المرجعية :** خريج الطب، الأطباء، التخصصات الطبية، مهنة الطب، اختيار المهنة.

*A specialty is the transition from the undifferentiated medical graduate phase to the final, fully-differentiated specialist who is almost restricted to one specialized area of medical work. The medical specialty chosen by the medical practitioner is important for both the practitioner and the society. It is an important determinant of the future supply of doctors in different specialties and the planning of the workforce for the health-care services.*

*Many factors influence specialty choices of the medical student and medical practitioner. These range from individual characteristics to the features of the specialty itself, including specialty-related lifestyle.*

*This article explores factors influencing specialty choices of medical students and young practitioners. The article also suggests some general and practical principles that junior doctors should follow in selecting a specialty to suit their personality bearing in mind the health needs of the society.*

**Key Words:** Medical graduate, medical practitioners, medical specialties, medical career, career choice.

## INTRODUCTION

Helping people, interest in science, and the intellectual challenge of the profession have been reported as important motives for the desire to study medicine.<sup>1-2</sup> After passing their qualifying examination, medical students face a selection and rather unique allocation process to prepare for further specialization into highly professional jobs. These are obtained after further education and practical work.

Therefore, medical careers begin undifferentiated, and postgraduate training ends with most doctors specialized in a specific area of practice. Specialty is the transition from the relatively undifferentiated, “stem doctor”,<sup>3</sup> potentially capable of entering any specialty, to the final, fully-differentiated specialist who is almost entirely restricted to one specialized area of medical work.

Medical education requires the exposure of

Correspondence to:

Dr. Salih S. Al-Ansari, P.O. Box 260747, Riyadh 11342, Saudi Arabia

E-mail: sansari@moe.gov.sa

undergraduates to a wide range of medical specialties, and most students will have sampled many of the broad areas of practice by the time they qualify. As a result, it is often assumed that students do not make their career choices until after they have finished medical school, remaining agnostic about their final specialty choice until that time. However, medical school entrants,<sup>4</sup> and even medical school applicants, often have strong preferences for, and particularly, against, some medical careers,<sup>5</sup> there is strong evidence, therefore, that career choice can be determined during or even before medical school.<sup>6,7</sup>

### **THE IMPORTANCE OF THE SUBJECT**

The medical specialties chosen by medical practitioners as their careers is an important determinant of the future supply of doctors in different specialties, and it is important for the planing of the workforce of health-care services. In addition, selection and professional training for a resident in a specific medical specialty requires much investment of time, training effort and money. Consequently, efficacy in the selection procedure is vital.

Insight into the reasons underlying the choice of medical careers in a country can improve medical career-planning. Better matches of preference and actual specialty may prevent the early termination of a medical career. These insights can also provide better information and counseling for medical students and young doctors, and guide them towards careers that serve their aspirations as well as the health needs of the society.

On the other hand, failure of proper selection can lead to the waste of time and financial resources, improper utilization of human talents, declining enthusiasm and performance, multiple changes among specialties, drop outs, and even abandonment of health careers.

In Arab countries, health care services have to be matched with existing health problems. These services should also be served by a variety of suitably trained work force for their health care priorities.

### **FACTORS AFFECTING CHOICES OF MEDICAL SPECIALTY**

Many factors influence the specialty choices of medical students and medical practitioners. These factors range from individual characteristics such as age, gender and type of personality, the moment of choice, elements of influence and role

models, to the characteristics of the specialty itself such as the types of problems and people encountered and served in the practice, the continuing development of new technologies, and the anticipation of specialty-related income.<sup>8-12</sup> These factors also include the type of curriculum used in the undergraduate medical education, exposure during the internship year and the type of rotations and whether the exposure to the different subspecialties during internship.

For example, students who choose general medicine are guided in their choice by the opportunity for a better contact with patients; patient type (e.g. chronic); to be in medicine is to be a general doctor; opportunity for broad and comprehensive caregiving; diagnostic challenge; intellectual content; satisfaction in deepening the study of the patient; ambulatory practice; opportunity to be involved in psychological and social aspects of medicine; desire to contribute to the community; need to keep options open; and by the little value they place on remuneration and lifestyle.<sup>2,13-23</sup>

On the other hand, students who choose surgical specialties justify their choice in terms of the opportunity for practical procedures and operations; the effective almost immediate results; their enjoyment of emergency care; the practical application of scientific knowledge; the research opportunities; the predominance of in-hospital practice; the prestige of surgery within the medical profession; the opportunity for leadership and to exercise authority; the greater remuneration; and the greater respect enjoyed by residents in this field.<sup>2,13-23</sup>

Recently, specialty-related lifestyle has drawn increased attention. Studies have suggested that it has become a determinant in student's criteria for the selection of specialties.<sup>24-26</sup> A "controllable lifestyle" characterized by personal time free of practice for leisure, for family, and avocational pursuits, and control of total weekly hours spent on professional responsibilities. This is related to the amount of time remaining for activities independent of medical practice and is a reflection of both total hours worked and number of nights on call.

In their study that included medical students from nine US medical schools, Schwartz et al<sup>8</sup> found that students prefer to select specialties that had fewer practice work hours per week, allowed adequate time for the pursuit of avocational activities, and seemed to have a fewer call nights. These aspects of lifestyle were found to be more

influential than more traditional motivators, such as remuneration, prestige, and length of training.<sup>27,28</sup> In addition, Jarecky et al<sup>25</sup> suggested that lifestyle is a main factor in later career changes by physicians in practice.

In the USA, the controllable lifestyle has significant implications on the preference of senior medical students for specialties with subsequent alteration in the distribution of US physicians by specialty. For example, Family practice and general surgery residency programs have experienced significantly lower fill rates during the last 6 years.<sup>29</sup>

This influence of lifestyle on specialty choice may be representative of a larger societal trend. Individuals aged 24 through 38 years in 2003 reportedly want time to devote to life outside work (for avocational pursuits) and thus weight lifestyle more heavily when choosing jobs.<sup>30-31</sup>

However, although a controllable lifestyle is likely to be important, clearly other factors are also part of what is a complex career decision-making process that ultimately determines a specific specialty choice. The "controllable lifestyle" may interact with other variables, such as income, work hours, and the years required for certification. Other factors, such as the growth of group practices and the increasing separation of outpatient and inpatient responsibilities, may affect the lifestyle of different specialties and allow the practitioner more control over the timing of professional commitments.

Future research will be required to gauge the impact that these and other changes have on the contingencies between lifestyle and specialty choice. In addition, although many studies have reported a strong association between the recent specialty preferences of medical seniors and controllable lifestyle, these do not establish a causal relationship.

## **CAREERS IN MEDICINE**

The medical services market is pointing towards expansion and diversification of medical knowledge, and a variety of highly specialized medical services already exist. Subspecialties emerging from pediatrics, radiology, orthopedics, plastic surgery, public health etc., constitute a growing part of health care system.

Careers differ in their demands, requiring different amounts of intellectual ability, manual dexterity, long-term commitment, or willingness to work in particular environments, and can be better suited to particular personalities, aptitudes,

and physical dispositions. Needless to say, individuals also differ in aptitudes, interests and abilities.

Career choice, therefore, requires that people consider the entire range of careers and then circumscribe those which they regard as broadly acceptable, in order to make their eventual choices within that subset.

Individual differences in learning ability lead to individual differences in the acquisition and level of mastery of specific medical competences. These differences should be considered in the selection and allocation of medical practitioners to postgraduate programs.

General medicine, surgery, pediatrics, obstetrics and gynecology, family medicine, psychiatry and others are many possibilities from which one is to be selected. The range has become even broader as a result of the emergence of new subspecialties within the traditional specialties. In addition, there are many specialties that, although very vital, are not very popular such as medical education, child health, adolescent's health, school health, geriatrics, medical statistics, health administration, and health economics. The need for such less popular specialties in less developed countries should be revisited in the light of differing demography, economy, health care system, health challenges, and health priorities.

## **HOW TO CHOOSE A HEALTH SPECIALTY?**

At the moment of choosing a specialty, the graduate has to look within himself and at the possibilities of a job and a chance of postgraduate training. Generally, career planning includes self-understanding, exploring the variety of medical careers, and finally choosing a specialty to meet community and personal objectives.

### **1. Self-understanding**

The choice of the "right" specialty by the graduate requires very transparent soul searching rather than a mere glance at the available "chances" of a job or a postgraduate training. The graduate has to think about who he is, what his spiritual, ethical, social and cultural values are, what his interests are, what matters to him both in life and at work, what his special talents are, and the possible rewards expected in the specialty. He has to examine the prevailing health determinants, health problems and health care system in his community, and consider the future trends in these fields.

## 2. Career exploration

The graduate has to explore a variety of specialties and career options available. He should communicate with physicians in various specialties to find out what they do in these areas, and gain a real-world perspective on their specialties. He also has to ask questions about the number of training years, the competitiveness, costs of specialty, degree of dependence on technology, number of working hours, day and night shifts, levels of stress at work, rules and regulations, social environment at work, and whether the career under consideration would present choices to deeper and more specific subspecialties.

## 3. Decision making

Once the graduate has gathered enough information on all possible choices, he has to compare what he have learned about himself in the first phase with the information he gathered about different specialties and careers. Bearing in mind the health care system, the available chances, the society's needs and the future trends, he should then examine the option that will allow the best integration of his internal determinants (his personality and abilities) and the external ones.

## CONCLUSIONS

In Saudi Arabia, the process by which young doctors choose a medical specialty needs to be investigated. This should study the personal characteristics of individuals and their choice of particular careers, background factors influencing career choice, their association with certain personal variables, the careers of specific groups, such as female doctors, and attitudes towards different specialties. Given the size of the country and the health care needs, the trends in specialty choice should be appraised to meet current and future needs.

## REFERENCES

1. Hyppola H, Kumpusalo E, Neittaanmaki L, Mattila K, Virjo I, Kujala S, et al. Becoming a doctor- was it the wrong career choice? *Soc Sc Med* 1998; 47:1383-7.
2. Vaglum P, Wiers-Jenssen J, Ekeberg O. Motivation for medical school: the relationship to gender and specialty preferences in a nationwide sample. *Med Educ* 1999;33(4):236-42.
3. Chant ADB. Designing a doctor. *Lancet* 1991;338:888.
4. McManus IC, Lefford F, Furnham AF, Shahidi S, Pincus T. Career preference and personality differences in medical school applicants. *Psychology, Health and Medicine* 1996;1:235-48.
5. Hutt R, Parsons D, Pearson R. The timing of and reasons for doctors' career decisions. *Health Trends* 1981;13:17-20.

6. Zeldow PB, Preston RC, Daugherty SR. The decision to enter a medical specialty: timing and stability. *Medical Education* 1992;26:327-32.
7. McManus IC. Medical careers: Stories of a life. *Medical Education* 1997;31:31-5
8. Schwartz RW, Haley JV, Williams C, et al. The controllable lifestyle factor and students' attitudes about specialty selection. *Acad Med* 1990;65:207-10.
9. Kassebaum DG, Szenas PL. Factors influencing the specialty choices of 1993 medical school graduates. *Acad Med*. 1994;69:163-170.
10. Rosenthal MP, Diamond JJ, Rabinowitz HK, et al. Influence of income, hours worked, and loan repayment on medical students' decision to pursue a primary care career. *JAMA* 1994;271:914-7.
11. Burack JH, Irby DM, Carline JD, Ambrozy DM, Ellsbury KE, Stritter FT. A study of medical students' specialty-choice pathways: trying on possible selves. *Acad Med* 1997;72:534-41.
12. Kiker BF, Zeh M. Relative income expectations, expected malpractice premium costs, and other determinants of physician specialty choice. *J Health Soc Behav* 1998;39:152-67.
13. Campos-Outcalt D, Senf J, Watkins AJ, Bastacky S. The effects of medical school curricula, faculty role models, and biomedical research support on choice of generalist physician careers: a review and quality assessment of the literature. *Acad Med* 1995;70(7):611-9.
14. Medical specialty choice: A select bibliography with abstracts. *Acad Med* 1993;68(5):391-436.
15. Ellsbury KE, Burack JH, Irby DM, et al. The shift to primary care: emerging influences on specialty choice. *Acad Med* 1996;71(10 Suppl):S16-8.
16. Block SD, Clark-Chiarelli N, Singer JD. Mixed messages about primary care in the culture of U.S. medical schools. *Acad Med* 1998;73(10):1087-94.
17. Krol D, Morris V, Betz J, Cadman E. Factors influencing the career choices of physicians trained at Yale-New Haven Hospital from 1929 through 1994. *Acad Med* 1998; 73(3): 313-7.
18. Odusanya OO, Nwawolo CC. Career aspirations of house officers in Lagos, Nigeria. *Med Educ* 2001;35(5):482-7.
19. Osborn EH. Factors influencing students' choices of primary care or other specialties. *Acad Med* 1993;68(7):572-4.
20. Fincher RM, Lewis LA, Jackson TW. Why students choose a primary care or nonprimary care career. The Specialty Choice Study Group. *Am J Med* 1994;97(5):410-7.
21. Gorenflo DW, Ruffin MT 4th, Sheets KJ. A multivariate model for specialty preference by medical students. *J Fam Pract* 1994;39(6):570-6.
22. Coutts-van Dijk L, Bray JH, Moore S, Rogers J. Prospective study of how students' humanism and psychosocial beliefs relate to specialty matching. *Acad Med* 1997;72(12):1106-8.
23. Batenburg V, Smal JA, Lodder A, de Melker RA. Are professional attitudes related to gender and medical specialty? *Med Educ* 1999;33(7):489-92.
24. Schwartz RW, Jarecky RK, Strodel WE, Haley JV, Young B, Griffen WO. Controllable lifestyle: a new factor in career choice by medical students. *Acad Med* 1989;64:606-9.
25. Jarecky RK, Schwartz RW, Haley JV, Donnelly MB. Stability of Medical Specialty selection at the University of Kentucky. *Acad Med* 1991;66:756-61.
26. Gelfand DV, Podnos YD, Wilson SE, Cooke J, Williams RA. Choosing general surgery: insights into career choices of current medical students. *Arch Surg* 2002;137:941-7.
27. National Resident Matching Program. Table 11. In: NRMP Data. Washington, DC: National Resident Matching Program; April 1997:23.
28. Dorsey ER, Jarjoura D, Rutecki GW. Influence of controllable lifestyle on recent trends in specialty choice by US medical students. *JAMA* 2003; 290: 1173-8
29. National Resident Matching Program. Tables 10-11. In: Results and Data 2002 Match. Washington, DC: National Resident Matching Program; April 2002:20-21.

30. Bond JT, Galinsky E, Swanberg JE. National Study of the Changing Workforce. New York, NY: Families and Work Institute; 1998:14-35.
31. Lang J. It's time over money for this generation. J Commerce 2000;1:7.